

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference

H2315-01

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2005/000074

International filing date (day/month/year)

06.01.2005

Priority date (day/month/year)

08.01.2004

International Patent Classification (IPC) or both national classification and IPC

Applicant

MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/000074

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>2, 3</u>	YES
	Claims	<u>1, 4, 5</u>	NO
Inventive step (IS)	Claims	<u> </u>	YES
	Claims	<u>1-5</u>	NO
Industrial applicability (IA)	Claims	<u>1-5</u>	YES
	Claims	<u> </u>	NO

2. Citations and explanations:

Document 1: JP 6-14929 A (Hewlett Packard Co.), 25 January 1994, Full text, all drawings & US 5318033 A

Document 2: JP 10-118063 A (Aloka Co., Ltd.), 12 May 1998, Full text, all drawings (Family: none)

Document 3: JP 2001-340338 A (Olympus Optical Co., Ltd.), 11 December 2001, Full text, all drawings (Family: none)

(Claims 1, 4, 5)

The inventions of claims 1, 4, 5 do not appear to possess novelty or involve an inventive step based on document 1 cited in the ISR. Document 1 discloses an ultrasonic diagnostic device in which four parallel reception beams are formed for each transmission beam, wherein the four reception beams are stored in a memory and a reciprocating reception line is formed by collinearly combining the stored reception beams (in particular, see table III, table IV). Because the formation of the reciprocating reception line prevents the generation of artifacts of a check board shape, it can be considered as filtering for relaxing the image quality difference between adjacent beams mentioned in claim 1. Therefore, the features of inventions of claims 1, 4, 5 are not significantly different from those of the invention described in document 1.

(Claim 2)

The invention described in claim 2 does not appear to involve an inventive step based on documents 1, 2 cited in the ISR. Document 2 describes an invention relating to an ultrasonic diagnostic device having a configuration in which a plurality of reception beams are formed for each transmission beam, wherein scanning is performed in both the tomography mode and the Doppler mode (in particular, see Par. No. 0055). Employing the technology described in document 2 in the invention described in document 1 would be obvious to a person skilled in the art. Employing a configuration in which the signals in a Doppler mode are also processed with a configuration preventing the occurrence of artifacts in the form of a checker board described in document 1 would be natural for a person skilled in the art.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

(Claim 3)

The invention of claim 3 does not appear to involve an inventive step based on documents 1, 3 cited in the ISR. Document 3 discloses an ultrasonic diagnostic device having a configuration in which filter coefficients of a space filter processing circuit are controlled so that they change from the vicinity of the oscillator surface in the direction of withdrawing therefrom. Creating the invention described in claim 3 by employing the technology disclosed in document 3 in the invention described in document 1 is obvious to a person skilled in the art.

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